

**REMARKS**

At the time of the Office Action dated December 17, 2003, claims 1-12 were pending. Applicants acknowledge, with appreciation, the Examiner's indication that claim 9 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In this Amendment, claims 1-9 have been amended only for better form. Care has been exercised to avoid the introduction of new matter.

**Information Disclosure Statement.**

The Examiner pointed out that a concise explanation of relevance of the reference "Mitsubishi Semiconductor Data Book 1997 Memory SRAM" is necessary for his consideration as to the Information Disclosure Statement filed January 24, 2002. Applicants have filed a Supplemental Information Disclosure Statement explaining relevance of the reference to the present invention. Accordingly, Applicants respectfully request the Examiner to consider the reference.

**Claims 1-4, 6-7 and 10-12 have been rejected under 35 U.S.C. §102(e) as being anticipated by Al-Shamma et al.**

In the statement of the rejection, the Examiner asserted that Al-Shamma et al. discloses a memory having power-saving modes identically corresponding to what is claimed. This rejection is respectfully traversed.

The factual determination of lack of novelty under 35 U.S.C. §102 requires the identical disclosure in a single reference of each element of the claimed invention, such that the identically

claimed invention is placed into the possession of one having ordinary skill in the art. *Helifix Ltd. v. Blok-Lok, Ltd.*, 208 F. 3d 1339, 54 USPQ2d 1299 (Fed. Cir. 2000); *Electro Medical Systems S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 32 USPQ2d 1017 (Fed. Cir. 1994).

Based on the above legal tenet, Applicants submit that there are significant differences between the claimed invention and a memory disclosed by Al-Shamma et al. that defeat the factual determination that Al-Shamma et al. identically describes the claimed invention within the meaning of 35 U.S.C. §102.

Al-Shamma et al. is directed to a non-volatile memory having a power-saving function. Al-Shamma et al. addresses a problem with flash memories in that they suffer from extraneous power consumption during a memory read. See column 1, lines 52-63. As shown in Fig. 1, once a new memory content is read from a memory 102, before being put at a memory output bus, it is stored in a data register (1) 104 and compared by a power saving circuit 108 with a previously read memory content in a data register (2) 106 which is currently on an output bus of a memory device 100. If a result of the comparison indicates that more than a predetermined number of the output bits have to be toggled in order to put the new memory content on the memory output bus, the new data is internally inverted to reduce the number of toggles at the output bus. See column 2, lines 39-63.

Claim 1 recites “a conversion unit for converting data... when said processing unit writes said data into said random access memory” (emphasis added), while Al-Shamma et al. discloses that “A system and a method are disclosed for providing a power saving mode during reading a memory device” (emphasis added) (see the Abstract and arrows shown in Fig. 1). Al-Shamma et al. also describes processing a bit image on an external data bus in a reading mode (the reference shows that bit line data is input from the left of the circuit shown in Fig. 3 and inversion/non-

inversion is selected by a bypass signal). Al-Shamma et al. is silent on whether its power saving mode is performed during a writing operation.

Similar to claim 1, claim 4 recites that “a substrater for taking a difference... when said processing unit writes data into said random access memory,” and claim 10 also recites “writing said converted write data to said random access memory.” Moreover, with respect to claim 4, Al-Shamma et al. does not disclose the “subtractor” to take difference between previous data and current data. The device of Al-Shamma et al. simply compares previous data and current data.

The above-described fundamental differences between the claimed invention and Al-Shamma et al. undermine the factual determination that Al-Shamma et al. identically describes the claimed invention within the meaning 35 U.S.C. §102. *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992); *Kloster Speedsteel AB v. Crucible Inc.*, 793 F.2d 1565, 230 USPQ 81 (Fed. Cir. 1986). Applicants, therefore, respectfully submit that the imposed rejection of claim 1 under 35 U.S.C. §102(b) for lack of novelty as evidenced by Al-Shamma et al. is not factually viable and, hence, solicit withdrawal thereof.

#### **Dependent Claims 2-4, 6, 7 and 10-12.**

A dependent claim is not anticipated if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claim. Therefore, claims 2-4, 6, 7 and 10-12 are patentable because they respectively include all the limitations of independent claims 1, 4 and 10. Accordingly, the Examiner's additional comments with respect to claims 2-4, 6, 7 and 10-12 do not cure the argued fundamental deficiencies of Al-Shamma et al.

Moreover, Applicants separately argue for dependent claims, as follows. As to claim 2, the reference does not disclose, among other things, the limitation “a detection circuit for detecting, when said processing unit writes data into said random access memory...,” for the reasons set forth above (emphasis added).

For, claims 3 and 12, it is submitted that Al-Shamma et al. does not disclose, among other things, “a second select circuit responsive to said flag to selectively provide data output from said random access memory and said inverted data from said second inversion circuit....” The reference is silent about converting inverted data in a memory to original one when the inverted data is read out from the memory.

The reference is silent about “detecting a data write timing of a predetermined period...,” recited in claim 6. Further, the Examiner did not properly identify where the reference discloses such a limitation.

For claim 7, Al-Shamma et al. does not disclose, among other things, “an adder for adding difference data... to said previous data....” The reference is silent on the different data, and thus silent on adding the different data to previous data to obtain original data.

It is further submitted that setting a flag when the number of bits having a first value is at least the number of bits having a second value, recited in claim 11, is not disclosed by the reference.

Applicants, therefore, respectfully traverse the rejections of those claims and solicit withdrawal thereof.

**Claims 5 and 8 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Al-Shamma et al. in view of Takahashi et al., and further in view of Igarashi et al.**

The Examiner admitted that Al-Shamma does not teach a variable-length coder of claim 5 and a variable-length decoder of claim 8. Then, the Examiner cited Takahashi et al., asserting that the reference teaches both coder and decoder. Igarashi et al. is also cited to show that it teaches a variable length code encoder to minimize power consumption. The Examiner then concluded that it would have been obvious to include the coder/decoder taught by Takahashi et al. and Igarashi et al. into Al-Shamma's data processor in order to reduce number of cycles required for acquisition of the coding/decoding processing operation (without prolonging the total processing time), therefore minimize power consumption of the system. This rejection is respectfully traversed.

Applicants submit that the Examiner has not established a *prima facie* basis to deny patentability to the claimed invention under 35 U.S.C. §103 for lack of the requisite factual basis. To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). Al-Shamma et al., Takahashi et al. and Igarashi et al., either individually or in combination, would not have suggested each and every limitation of claims 5 and 8.

Al-Shamma et al. does not disclose the limitations "a substrater for taking a difference... when said processing unit writes data into said random access memory," as recited in claim 4 (emphasis added), for the reasons set forth above. Claims 5 and 8 recite those limitations because they respectively depend from claim 4. Further, Al-Shamma et al. is silent on the difference data to be coded and decoded, recited in claims 5 and 8, as the Examiner admitted.

Further, Takahashi et al. and Igarashi et al. also do not disclose the different data obtained in the claimed invention. Those two references are directed to image processing, i.e., an image

compression method, which is in a different field of endeavor. Thus, Takahashi et al. and Igarashi et al. do not cure the argued fundamental deficiencies of Al-Shamma et al.

Accordingly, it is submitted that all the claim limitations are not taught or suggested by Al-Shamma et al., Takahashi et al. and Igarashi et al.

Applicants also submit that there is no motivation to modify Al-Shamma et al. based on the teachings of Takahashi et al. and Igarashi et al.

In imposing a rejection under 35 U.S.C. §103, the Examiner is required to make a “thorough and searching” factual inquiry and, based upon such a factual inquiry, explain why one having ordinary skill in the art would have been realistically impelled to modify Al-Shamma’s particular memory, to arrive at the claimed invention. *In re Lee*, 277 F.3d 1338, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002).

In applying the above legal tenet to this case, it is submitted that the Examiner has not established the requisite motivational element. First, there is nothing to be modified in Al-Shamma et al. because the reference does not disclose the difference data to be coded and decoded. Second, as mentioned above, Takahashi et al. and Igarashi et al. are directed to image processing, which is in a different field of endeavor. Third, the Examiner pointed out that Igarashi teaches variable length code encoder to minimize power consumption, but the Examiner stretched the statement in Igarashi et al. The summary of invention of Igarashi et al. cited by the Examiner says as follows:

The present invention ... has its object to avoid unnecessary endless operation of the header information processor that has issued an operation start command of an encoding or decoding process for a predetermined processing unit to a variable-length code encoder or decoder without prolonging the total processing time, and to minimize power consumption of the whole system (the paragraph [0012]).

What Igarashi et al. explains is that avoiding unnecessary endless operation of the header information processor minimizes power consumption of the whole system. Contrary to the Examiner's assertion, the reference does not teach that variable length code encoder minimizes power consumption. Thus, the Examiner's assertion is not supported by any factual basis.

Accordingly, the Examiner did not provide any substantial evidence to explain why one having ordinary skill in the art would have been realistically impelled to modify Al-Shamma's particular memory, to arrive at the claimed invention.

Based upon the foregoing, Applicants submit that the Examiner has not established a *prima facie* basis to deny patentability to the claimed invention for lack of the requisite factual basis and want of the requisite realistic motivation. Applicants, therefore, respectfully submit that the imposed rejection of claims 5 and 8 under 35 U.S.C. §103 for obviousness predicated upon Al-Shamma et al. in view of Takahashi et al. and Igarashi et al. is not factually or legally viable and, hence, solicit withdrawal thereof.

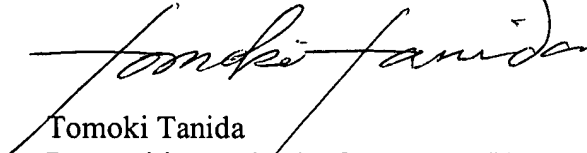
#### **Conclusion.**

Accordingly, it is urged that the application is in condition for allowance, an indication of which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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